

**AMENDMENTS TO THE CLAIMS:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

**LISTING OF CLAIMS:**

1. (Currently Amended) A ~~Soller-slit~~ device for collimating high energy X-rays comprising:

a plurality of substantially parallel planar blades that are stacked and spaced apart from one another to form a Soller slit having passages for the transmission of X-rays, said blades being constructed from glass sheets each having a thickness less than 250  $\mu\text{m}$  and whose surfaces have a non-reflective treatment to absorb divergent X-rays that are not substantially parallel to said blades.

Claim 2-4. (Canceled).

5. (Original) The Soller slit device of claim 1 wherein said device transmits at least 60% of incident high-energy radiation.

6. (Original) The Soller slit device of claim 5, wherein the transmission efficiency is in the range of 60-80%.

7. (Original) The Soller slit device of claim 1, wherein the length of each blade in the direction of transmission is greater than 5 cm.

8. (Original) The Soller slit device of claim 7, wherein the blade length is at least 12 cm.

9. (Original) The Soller slit device of claim 8, wherein the blade length is in the range of 12-15 cm.

10. (Original) The Soller slit device of claim 1, wherein the thickness of each blade is no greater than 70  $\mu\text{m}$ .

11. (Original) The Soller slit device of claim 10, wherein the thickness of each blade is approximately 50  $\mu\text{m}$ .

Claim 12. (Canceled).

13. (Previously Presented) The Soller slit device of claim 1, wherein the surface of each of the blades has a coating that is non-reflective to X-rays.

14. (Previously Presented) The Soller slit device of claim 13, wherein the blades each have a coating of barium sulfate.

15. (Previously Presented) The Soller slit device of claim 1, wherein the surface of each of the blades is etched to prevent reflection.

16. (Currently Amended) A system for performing high energy radiation diffractometry, comprising:

a high energy X-ray source;

a high energy radiation collimating device comprising a plurality of substantially parallel ~~plates~~ planar blades that are stacked and spaced apart from one another to form passages for the transmission of X-rays, said blades being constructed from glass sheets each having a thickness less than 250  $\mu\text{m}$  and whose surfaces have a non-reflective treatment to absorb divergent X-rays from said source that are not substantially parallel to said blades; and

a device for collecting X-ray radiation after the X-ray radiation impinges on a sample to be examined.

Claims 17-18. (Canceled).

19. (Currently Amended) The diffractometry system of claim 16, wherein the high energy radiation collimating device ~~comprises~~ forms a Soller slit device.

Claims 20-22. (Canceled)

23. (Previously Presented) The diffractometry system of claim 16, wherein the length of each blade in the direction of transmission is greater than 5 cm.

24. (Previously Presented) The diffractometry system of claim 23, wherein the blade length is at least 12 cm.

25. (Previously Presented) The diffractometry system of claim 24, the blade length is in the range of 12-15 cm.

26. (Previously Presented) The diffractometry system of claim 16, wherein the thickness of each blade is no greater than 70 $\mu$ m.

27. (Previously Presented) The diffractometry system of claim 26, wherein the thickness of each blade is approximately 50  $\mu$ m.

28. (Previously Presented) The diffractometry system of claim 16, wherein the surface of each of the blades has a coating that is non-reflective to X-rays.

29. (Previously Presented) The diffractometry system of claim 28, wherein the blades each have a coating of barium sulfate.

30. (Previously Presented) The diffractometry system of claim 16, wherein the surface of each of the blades is etched to prevent reflection.